A Hybrid Suture Technique: Suture Modification With Dental Roll Insertion

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Epidermal suture knots can cause discomfort, skin irritation, and an increased risk for infection. We describe a hybrid suture method that combines elements of traditional simple interrupted and retention sutures with a layer of sterile, absorbent rolled gauze or a dental roll placed beneath the suture knots. This inexpensive method promotes a cleaner and more stable wound-healing environment, enhances patient comfort, simplifies postoperative wound care, and reduces complications such as necrosis and infection.

Practice Gap

If not cared for properly, epidermal suture knots can cause discomfort, skin irritation, and an increased risk for infection. There is limited guidance on a simple adaptable method to reduce tram-track marks from epidermal sutures exerting pressure on the epidermis while still facilitating healing in dermatologic procedures such as excision of cysts or lipomas. We present a hybrid suture method that combines elements of traditional simple interrupted and retention sutures with a layer of sterile, absorbent rolled gauze or a dental roll placed beneath the suture knots.

The Technique

Traditional epidermal sutures concentrate pressure at the knot, increasing the risk for tram-track marks and patient discomfort. To address this, we developed a hybrid technique combining simple interrupted sutures with a sterile dental roll beneath the knots to reduce pressure, protect the wound, and promote comfortable wound healing.

After excision of a cyst, we approximated the wound edges with buried vertical mattress sutures for eversion (a set-back buried dermal suture also may be used). The sutures initially were placed loosely but were left untied (eFigure 1A). A sterile dental roll with sterile petrolatum on the underside was positioned over the wound before the knots were secured, similar to a bolster dressing (eFigures 1B and 1C). The dressing then was covered and left in place for 24 to 48 hours. After removal of the dressing, no bandage was needed because the wound was clean and hemostatic and the dental roll had absorbed minimal drainage and protected the incision edges during the initial healing period. The patient applied petrolatum daily to prevent the dental roll from drying out. Sutures and the bolster were removed at 14 days without complications or complaints.

Rolled gauze may be used as an alternative to the dental roll. To maintain a clean surgical field, nonsterile gauze may be soaked in a disinfectant (eg, alcohol) and wrung out to remove excess moisture before placement on the skin. The side of the gauze in contact with the skin also should be lubricated with petroleum jelly to prevent sticking. If the sutures slip during knot tying, one end can be secured with a needle driver or hemostat. Patients should be advised to keep the dental roll dry to prevent maceration and promote optimal wound healing, but minor dampness is permissible if followed by air-drying.

This suturing method is most suitable for low- to moderate-tension closures such as cyst or lipoma excisions. The serosanguinous drainage can be absorbed by the gauze or dental roll while pressure is simultaneously applied to the wound. We do not recommend this technique for high-tension wounds in which large surface areas are removed (eg, skin cancer excisions on the posterior shoulder that require wide margins). Close

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The eFigures are available in the Appendix online at www.mdedge.com/cutis.

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monitoring of the wound for dehiscence is needed. As the sutures stretch and swelling decreases, the pressure is distributed accordingly without excessive compression to the wound line. Depending on the location, the sutures and dental roll can be removed in 7 to 14 days.

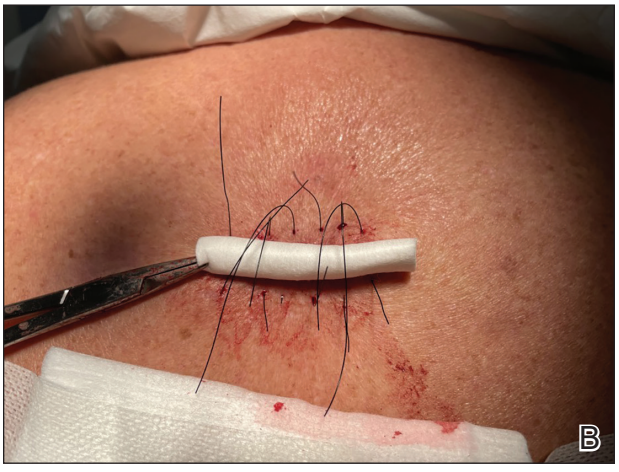
Practice Implications

Placing a dental roll or rolled gauze beneath suture knots can prevent tram-track scarring by eliminating direct knot-to-skin contact (eFigure 2).[1,2] This technique distributes tension evenly, reduces the risk for wound edge necrosis, and absorbs serosanguinous drainage while providing hemostasis. The modification is quick, inexpensive, and especially beneficial for patients who may struggle with complex wound care, maintaining a clean environment until sutures are removed.

REFERENCES

1. Li E, Zhang T, Ma Q, et al. Effect of modified Allgöwer-Donati suture technique on wound cosmetics in spinal surgery. *Orthop Surg*. 2022;14:678-685. doi:10.1111/os.13188
2. Park L, Lum ZC, Joo JS. Allgöwer-Donati suture: a technique to preserve skin microcirculation in dermatologic surgery. *J Am Acad Dermatol*. 2024;90:E129-E130. doi:10.1016/j.jaad.2023.05.052

APPENDIX



eFIGURE 1. A, Sutures are initially placed with loose, long ends. B, A sterile dental roll is placed over the wound after applying petrolatum. C, Suture knots are secured.

eFIGURE 2. Final well-approximated scar.